CLAIMS:

What is claimed is:

1.   A method, in a data processing system, for reducing the size of an object, the
5   method comprising:
      dividing an object into a plurality of blocks;
      identifying similar blocks within the plurality of blocks; and
      differentially compressing the similar blocks to form a reduced object.

10   2.   The method of claim 1, wherein the plurality of blocks are fixed in size.

3.   The method of claim 1, wherein the plurality of blocks are variable in size and
determined based on characteristics of content of the object.

15   4.   The method of claim 1, further comprising:
      identifying identical blocks within the plurality of blocks; and
      suppressing the identical blocks without differential compression.

5.   The method of claim 4, further comprising:
20   performing data compression on at least one block within the plurality of blocks
that is not differentially compressed or suppressed.

6.   The method of claim 1, further comprising:
      performing data compression on at least one block within the plurality of blocks
25   that is not differentially compressed.

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7. The method of claim 1, further comprising:

compressing the object to form a compressed object;

comparing an effectiveness of the compressed object with an effectiveness of the reduced object; and

5   using the compressed object if the effectiveness of the compressed object is greater than the effectiveness of the reduced object.

8. The method of claim 7, wherein effectiveness is measured by one of speed of execution and object size.

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9. The method of claim 7, further comprising:

using the reduced object if the effectiveness of the compressed object is less than the effectiveness of the reduced object.

15   10. The method of claim 1, wherein identifying similar blocks includes identifying one or more features of the plurality of blocks.

11. The method of claim 10, wherein identifying one or more features includes calculating one or more fingerprints for the plurality of blocks.

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12. The method of claim 11, wherein identifying similar blocks further includes:

calculating super fingerprints for the one or more fingerprints; and

comparing super fingerprints of the plurality of blocks to determine common features.

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13. The method of claim 10, wherein identifying similar blocks further includes:

determining whether blocks have a specified number of matching features.

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14. The method of claim 10, wherein identifying similar blocks further includes:

identifying a reference block that matches a greatest number of features of

remaining similar blocks.

5 15. The method of claim 10, wherein identifying similar blocks includes:

using heuristics to identify similar blocks.

16. The method of claim 1, wherein the reduced object is stored in a storage unit.

10 17. The method of claim 1, wherein the reduced object is transmitted over a network.

18. An apparatus for reducing the size of an object, the apparatus comprising:

division means for dividing an object into a plurality of blocks;

identification means for identifying similar blocks within the plurality of blocks;

15 and

compression means for differentially compressing the similar blocks to form a

reduced object.

19. The apparatus of claim 18, wherein the plurality of blocks are fixed in size.

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20. The apparatus of claim 18, wherein the plurality of blocks are variable in size and

determined based on characteristics of content of the object.

21. The apparatus of claim 18, further comprising:

25 means for identifying identical blocks within the plurality of blocks; and

means for suppressing the identical blocks without differential compression.

22.   The apparatus of claim 21, further comprising:

means for performing data compression on at least one block within the plurality of blocks that is not differentially compressed or suppressed.

5   23.   The apparatus of claim 21, further comprising:

means for performing data compression on at least one block within the plurality of blocks that is not differentially compressed.

24.   The apparatus of claim 21, further comprising:

10   means for compressing the object to form a compressed object;

means for comparing an effectiveness of the compressed object with an effectiveness of the reduced object; and

means for using the compressed object if the effectiveness of the compressed object is greater than the effectiveness of the reduced object.

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25.   The apparatus of claim 24, wherein effectiveness is measured by one of speed of execution and object size.

26.   The apparatus of claim 24, further comprising:

20   means for using the reduced object if the effectiveness of the compressed object is less than the effectiveness of the reduced object.

27.   The apparatus of claim 18, wherein the identification means includes means for identifying one or more features of the plurality of blocks.

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28.   The apparatus of claim 27, wherein the means for identifying one or more features includes means for calculating one or more fingerprints for the plurality of blocks.

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29.   The apparatus of claim 28, wherein the identification means further includes:

means for calculating super fingerprints for the one or more fingerprints; and

means for comparing super fingerprints of the plurality of blocks to determine

common features.

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30.   The apparatus of claim 27, wherein the identification means further includes:

means for determining whether blocks have a specified number of matching

features.

10   31.   The apparatus of claim 27, wherein identification means further includes:

means for identifying a reference block that matches a greatest number of features

of remaining similar blocks.

32.   The apparatus of claim 18, wherein the reduced object is stored in a storage unit.

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33.   The apparatus of claim 18, wherein the reduced object is transmitted over a

network.

34.   A computer program product, in a computer readable medium, for reducing the

20   size of an object, the computer program product comprising:

instructions for dividing an object into a plurality of blocks;

instructions for identifying similar blocks within the plurality of blocks; and

instructions for differentially compressing the similar blocks to form a reduced

object.

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35.   The computer program product of claim 34, further comprising:

instructions for identifying identical blocks within the plurality of blocks; and

instructions for suppressing the identical blocks without differential compression.

5   36.   The computer program product of claim 35, further comprising:

instructions for performing data compression on at least one block within the

plurality of blocks that is not differentially compressed or suppressed.

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